

EFFECT FROM EXTRACT OF COGON GRASS (*Imperata cylindrica* L.) AND
SEDGES (*Cyperus rotundus* L.) ON WEED SUPPRESSION AND GROWTH
AND DEVELOPMENT OF STRING BEAN PLANTS (*Vigna sinensis* L.)

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ABSTRACT

String beans (*Vigna sinensis* L.) are a widely consumed vegetable in Indonesia. String bean productivity can decrease due to weed competition with plants. The study discusses weed suppression using natural herbicides, namely cogon grass and sedge extracts. The study purpose to determine the effect of cogon grass and sedge extracts in suppressing weeds and on the growth and yield of long bean plants. The study was conducted from August to October 2024 in Sembung Village, Karangjati District, Ngawi Regency, East Java. The study used one-factor Randomized Complete Block Design (RCBD), namely the administration of cogon grass and sedge extracts. The treatments tested were control (no treatment), cogon grass extract concentrations of 100 mL/L, 200 mL/L, 300 mL/L, 400 mL/L, sedge extract concentrations of 100 mL/L, 200 mL/L, 300 mL/L, and 400 mL/L. Parameters observed were vegetation analysis, weed population, dry weight of weeds, plant height, pod weight per plant and per plot, number of pods, and pod length. Data were analyzed using ANOVA (Analysis of Variance) level 5%, followed by Least Significant Difference (LSD) test level 5%. The results showed that the treatment of cogon grass extract 400 mL/L gave the best results in weed control efficiency with an efficiency value of 63.99%, while the treatment of cogon grass extract 200 mL/L gave the best results in the number of pods with 19.67 pods and pod weight per plot with a weight of 1,414.40 grams.

Keywords: *String Beans, Cogon grass, and Sedges*